

STUDY & EVALUATION SCHEME
B.TECH: MECHANICAL ENGINEERING
SPECIALIZATION: ELECTRIC VEHICLE
I YEAR: I SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	C
THEORY						
1	BPH1701/ BCY1701	Physics/Chemistry	3	1	3	5.5
2	BMA1001	Mathematics	3	1	0	4
3	BEE1701/ BCS1701	Basic Electrical Engineering/Programming for solving Problems	3	1	2	5
4	BME1701/BME1702	Engineering Graphics and Design/Working Practice	1	0	4	3
5	XESX601/BHU1701	Environmental Science*/English	2/2	0/0	0/2	0/3
TOTAL			12/12	3/3	9/11	17.5/20.5

- * - Mandatory Non-Credit Course
- L - Lecture
- T - Tutorial
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I YEAR: II SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	C
THEORY						
1	BCY2701/BPH2701	Chemistry /Physics	3	1	3	5.5
	BMA2001	Mathematics	3	1	0	4
2	BCS2701/ BEE2701	Programming for solving Problems /Basic Electrical Engineering	3	1	2	5
3	BME2702/BME2701	Working Practice /Engineering Graphics and Design	1	0	4	3
4	BHU2701/XESX601	English /Environmental Science*	2/2	0/0	0/2	0/3
TOTAL			12/12	3/3	11/9	20.5/17.5

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II YEAR: III SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BME3005	EngineeringMechanics	3	1	0	40	60	100	4
2	BME3006	Thermodynamics	3	1	0	40	60	100	4
3	BEC3016	Basic ElectronicsEngineering	3	1	0	40	60	100	4
4	BPH3004-ME	PhysicsII(ME)	3	1	0	40	60	100	4
5	BMA3010-ME	MathematicsIII(ME)	3	1	0	40	60	100	4
6	BSS3001	Soft Skills &InterpersonalCommunication	2	0	0	100	00	100	2
7	BEE3001-VT	Fundamentals of EV & HEV	3	0	0	40	60	100	2
PRACTICAL/TRAINING/PROJECT									
8	BEE3501-VT	EV Fundamental Lab	0	0	2	80	20	100	1
TOTAL			20	5	2	420	380	800	25

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YEAR: IV SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BME4006	Applied Thermodynamics	3	1	0	40	60	100	4
2	BME4007	Fluid Mechanics and Fluid Machines	3	1	0	40	60	100	4
3	BME4008	Strength of Materials	3	1	0	40	60	100	4
4	BME4009	Instrumentation and Control	3	1	0	40	60	100	4
5	BME4010	Materials Engineering	3	0	0	40	60	100	3
6	BBT 4023	Biology	2	0	0	40	60	100	2
7	XHUX602	Essence of Indian Traditional Knowledge	2	0	0	Satisfactory/Unsatisfactory			0
8	BEE4001-VT	Powertrain & Modes	3	0	0	40	60	100	2
PRACTICAL/TRAINING/PROJECT									
9	XMEX601	Industrial Visit	-	-	-	Satisfactory/Unsatisfactory			0
10	BEE4501-VT	EV Powertrain Lab	0	0	2	20	80	100	1
TOTAL			22	4	2	360	440	800	27

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III YEAR: V SEMESTER

S. NO	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BME5006	HeatTransfer	3	1	0	40	60	100	4
2	BME5007	SolidMechanics	3	1	0	40	60	100	4
3	BME5008	Manufacturing Processes	3	0	0	40	60	100	3
4	BME5009	Kinematics andTheoryof Machines	3	1	0	40	60	100	4
5	-	OpenElective-I	3	0	0	40	60	100	3
6	BEE5001-VT	Battery, BMS & BTMS	3	0	0	40	60	100	3
7	XLAX601	Constitutionof India	2	0	0	Satisfactory/Unsatisfactory			0
PRACTICAL/TRAINING/PROJECT									
8	BME5506	MechanicalEngineeringLaboratory (Thermal)I	0	0	3	80	20	100	1.5
9	BME5507	Seminar	0	0	2	100	-	100	1
10	BEE5501-VT	Battery, BMS & BTMS Lab	0	0	2	20	80	100	1
11	BAP5501	Aptitude andReasoning& OnlineTest	0	0	0	Satisfactory/Unsatisfactory			0
TOTAL			20	3	7	440	460	900	24.5

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III YEAR: VI SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BME6004	Manufacturing Technology	4	0	0	40	60	100	4
2	BME6005	Design of Machine Elements	3	1	0	40	60	100	4
3	-	Department Elective-I	3	0	0	40	60	100	3
4	-	Department Elective-II	3	0	0	40	60	100	3
5	-	Open Elective-II	3	0	0	40	60	100	3
6	BEE6001-VT	EV Charging Infra	3	0	0	40	60	100	3
PRACTICAL/TRAINING/PROJECT									
7	BME6506	Mechanical Engineering Laboratory (Design) II	0	0	3	80	20	100	1.5
8	BEE6501-VT	EV Charging Infra Lab	0	0	2	20	80	100	1
9	BAP6601	Aptitude and Reasoning & Online Test	0	0	0	Satisfactory/Unsatisfactory			0
TOTAL			19	1	5	340	460	800	22.5

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IV YEAR: VII SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	BME7005	Automation in Manufacturing	3	0	0	40	60	100	3
2	-	Department Elective-III	3	0	0	40	60	100	3
3	-	Department Elective-IV	3	0	0	40	60	100	3
4	-	Open Elective-III	3	0	0	40	60	100	3
5	BME7006	Automotive Safety	4	0	0	40	60	100	4
PRACTICAL/TRAINING/PROJECT									
6	BME7506	Mechanical Engineering Laboratory (Manufacturing) III	0	0	3	80	20	100	1.5
7	BME7501	Project-I	0	0	12	100	20	100	6
8	BME7503	Summer Training	0	0	2	100	0	100	1
9	BME7508	EV Design Lab	0	0	4	20	20	100	2
TOTAL			16	0	21	500	400	900	26.5

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IV YEAR: VIII SEMESTER

S. NO.	SUBJECT CODE	SUBJECT	L	T	P	CIE	ESE	TOTAL	C
1	-	Department Elective-V	3	0	0	40	60	100	3
2	-	Department Elective-VI	3	0	0	40	60	100	3
3	-	Open Elective-IV	3	0	0	40	60	100	3
4	-	Open Elective-V	3	0	0	40	60	100	3
PRACTICAL/TRAINING/PROJECT									
5	BME8503	Project-II	0	0	14	80	20	100	7
TOTAL			12	8	14	240	260	500	19

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LIST OF ELECTIVES

LIST OF OPEN ELECTIVES

	SUBJECT CODE	SUBJECT	DEPARTMENT	SEMESTER
Open Elective-I	BHU5301	Organizational Psychology	Humanities	V
	BHU5302	Organizational Sociology	Humanities	V
Open Elective-II	BMG6302	Principle of Management	IMCE	VI
	BMG6301	Economics	IMCE	VI
Open Elective-III	BMA7301	Operations Research	INSH	VII
	BCM7301	Finance and Accounting	IMCE	VII
Open Elective-IV	BME8306	Operations Planning and Control	FOME	VIII
	BME8302	Project Management	FOME	VIII
Open Elective-V	BME8307	Total Quality Management	FOME	VIII
	BME8308	Maintenance Engineering and Management	FOME	VIII
	BME8309	Six Sigma	FOME	VIII

LIST OF DEPARTMENTAL ELECTIVES

	SUBJECT CODE	SUBJECT	SEMESTER
Department Elective-I	BME 6001-DE1	Mechatronics System	VI
	BME 6002-DE1	Refrigeration and Air Conditioning	VI
	BME 6003-DE1	Composite Materials	VI

	BME 6004- DE1	OperationsManagement–I	VI
Department Elective- II	BME 6001- DE2	FiniteElementAnalysis	VI
	BME 6002- DE2	UnconventionalManufacturingProcesses	VI
	BME 6003- DE2	I.CEngine	VI
	BME 6004- DE2	MaintenanceEngineeringandManagement	VI
Department Elective- III	BME 7001- DE3	ComputerAidedDesign	VII
	BME 7002- DE3	PowerPlantEngineering	VII
	BME 7003- DE3	ComputerAidedManufacturing	VII
	BME 7004- DE3	OperationManagement II	VII
Department Elective- IV	BME 7001- DE4	AnalysisandSynthesisofMechanism	VII
	BME 7002- DE4	GasDynamicsandJetPropulsion	VII
	BME 7003- DE4	MicroMachining	VII
	BME7004- DE4	ProjectManagement	VII
Department Elective- V	BME 8001- DE5	DesignofTransmissionSystem	VIII
	BME 8002- DE5	AutomobileEngineering	VIII
	BME 8003- DE5	AdvanceFoundryTechnology	VIII
	BME 8004-	LeanManufacturing	VIII

	DE5		
Department Elective- VI	BME 8001- DE6	Design of Thermal System	VIII
	BME 8002- DE6	Energy Conservation and Management	VIII
	BME 8003- DE6	Advanced Welding Technology	VIII
	BME 8004- DE6	Total Quality Management	VIII